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APPLICATION NO.	FILING DATE	FIRST NAMED INVENTOR	ATTORNEY DOCKET NO.	CONFIRMATION NO.
09/902,828	07/10/2001	Darren Kenneth Rogers	1368 CIP (Touchstone)	9834

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EXAMINER
MEDLEY, MARGARET B

ART UNIT	PAPER NUMBER
1714	7

DATE MAILED: 07/29/2002

Please find below and/or attached an Office communication concerning this application or proceeding.

TC 7

Office Action Summary

Application No.	Applicant(s)
09/824,197	ROGERS
Examiner	**Group Art Unit**
MEDLEY	1714

—The MAILING DATE of this communication appears on the cover sheet beneath the correspondence address—

Period for Reply

A SHORTENED STATUTORY PERIOD FOR REPLY IS SET TO EXPIRE Three MONTH(S) FROM THE MAILING DATE OF THIS COMMUNICATION.

- Extensions of time may be available under the provisions of 37 CFR 1.136(a). In no event, however, may a reply be timely filed after SIX (6) MONTHS from the mailing date of this communication.
- If the period for reply specified above is less than thirty (30) days, a reply within the statutory minimum of thirty (30) days will be considered timely.
- If NO period for reply is specified above, such period shall, by default, expire SIX (6) MONTHS from the mailing date of this communication.
- Failure to reply within the set or extended period for reply will, by statute, cause the application to become ABANDONED (35 U.S.C. § 133).
- Any reply received by the Office later than three months after the mailing date of this communication, even if timely, may reduce any earned patent term adjustment. See 37 CFR 1.704(b).

Status

☒ Responsive to communication(s) filed on 4-04-02 and 4-24-02.

☐ This action is **FINAL.**

☐ Since this application is in condition for allowance except for formal matters, **prosecution as to the merits is closed** in accordance with the practice under *Ex parte Quayle*, 1935 C.D. 1 1; 453 O.G. 213.

Disposition of Claims

☒ Claim(s) 1-15 is/are pending in the application.

Of the above claim(s) _____ is/are withdrawn from consideration.

☐ Claim(s) _____ is/are allowed.

☒ Claim(s) 1-15 is/are rejected.

☐ Claim(s) _____ is/are objected to.

☐ Claim(s) _____ are subject to restriction or election requirement

Application Papers

☐ The proposed drawing correction, filed on _____ is ☐ approved ☐ disapproved.

☐ The drawing(s) filed on _____ is/are objected to by the Examiner

☐ The specification is objected to by the Examiner.

☐ The oath or declaration is objected to by the Examiner.

Priority under 35 U.S.C. § 119 (a)-(d)

☐ Acknowledgement is made of a claim for foreign priority under 35 U.S.C. § 119 (a)-(d).

☐ All ☐ Some* ☐ None of the:

☐ Certified copies of the priority documents have been received.

☐ Certified copies of the priority documents have been received in Application No. _____.

☐ Copies of the certified copies of the priority documents have been received in this national stage application from the International Bureau (PCT Rule 17.2(a))

*Certified copies not received: _____.

Attachment(s)

☒ ~~Information Disclosure Statement(s), PTO-1449, Paper No(s).~~ NONE _____

☒ Notice of Reference(s) Cited, PTO-892 ✓

☐ Notice of Draftsperson's Patent Drawing Review, PTO-948

☐ Interview Summary, PTO-413

☐ Notice of Informal Patent Application, PTO-152

☐ Other _____

Office Action Summary

DETAILED ACTION

The ASTM Designation: D 720-91 article received on April 22, 2002 has been made of record.

The 35 USC 112 first paragraph rejection in withdrawn in view of applicants amendments and arguments made of record..

Claim 1 objected to because of the following informalities: The phrase 0.8 g/cm^3 should be corrected in line 4 of claim 1 so that the numeral 3 is a superscript. Appropriate correction is required.

The following is a quotation of 35 U.S.C. 103(a) which forms the basis for all obviousness rejections set forth in this Office action:

> (a) A patent may not be obtained though the invention is not identically disclosed or described as set forth in section 102 of this title, if the differences between the subject matter sought to be patented and the prior art are such that the subject matter as a whole would have been obvious at the time the invention was made to a person having ordinary skill in the art to which said subject matter pertains. Patentability shall not be negatived by the manner in which the invention was made.

Claims 1-5 are rejected under 35 U.S.C. 103(a) as being unpatentable over Harnett 3,309,437 in view of Koppelman 4,127,391 combined with Madley et at (Madley) GB 1,489,690 and Kirk-Othemer.

Harnett teaches a porus based product having compressive strength typically in excess of 5,000 psi (note column 4, lines 1-9) when heated to 950^{0}C and an apparent density of 0.93 g/cc (note Table 1 for Example 4 and 5) and further graphitizing (note column 5, lines 20-44) which anticipates claims 1-4 of Applicant. The apparent density of 0.93 g/cm of patentees is rendered obvious the apparent density of between about 0.1 and about 0.8 g/cm^3 of applicants. It is the examiner's position that "about 0.8 g/cm"

reads on 0.93 g/cc. Harnett is silent to the coal based product and having a free index swell of between about 3.5 and about 5.0, and preferably between about 3.75 and about 4.5.

It would be obvious to the artisan in the art to use a coal based product as the starting material for the coke product in view of Koppelman and a coal with swelling index between 3 and 9 in view of Madley and Kirk-Othmer. Koppelman teaches coke produced from bituminous coal, column 1, lines 17-68, Examples 1-2 and the Table at column 11. It is the examiner's position that since coke is produced from coal, it is a coal base product.

Patentees Madley teaches the artisan in the art that by varying the pretreatment conditions, e.g. temperature and reaction time, the swelling properties of a specific coal can be controlled to a substantial degree for the subsequent use of the coal in further process step, note page 1, lines 69-75. Madley further teaches a coal having as well index of 3.5 which encompass the about 3.5 and about 5.0 range, and suggest the preferred range of about 3.75 and about 4.5 of the instant claims, note Madley the example on page 2, lines 32 to 10.

The Kirk-Othmer article teaches the artisan in the art that it is state of the art knowledge that best cokes come from coals having swelling indexes between 4 and 9, the last paragraph on page 455 of Vol. 6. The article further discloses application of Coal Petrology and Petrography, pages 429 to page 434 of Vol. 6, particularly figure 3 at page 431 for swelling indexes of coal and Table 4 for the coal classification. It would be obvious to the artisan in the art to use the bituminous coal of Koppelman and

particularly a coal having 3.5-9 swell index of the secondary references as the starting material coal of the primary reference having a swell index of between 4 and 9 to produce the best coke.

Claims 6-10 are rejected under 35 U.S.C. 103(a) as being unpatentable over Harnett 3,309,437 in view of Koppelman 4,127,391 combined with Madley et al (Madley) GB 1,489,690 and Kirk-Othmer as applied to claims 1-5 above, and further in view of Harnett 3,309,437 in view of Koppelman 4,127,391 combined with Madley et al (Madley) GB 1,489,690 and Kirk-Othmer.

Harnett teaches a process for producing porous coal-based product produced from coal comprising the steps of heating coal particles in a mold, carbonizing at a temperature over 600^0C at heat rate of 10^0C, cooling said carbonized body and further graphitizing said carbonized body, note in the entirety, especially Examples 1-2 and 3-12 of table 1, column 1, line 51 to column 2, lines 1-35, column 3, lines 1-22 and 49 to column 4, lines 1-65 and column 6.

Applicants claimed process differs from that of the prior art in that the instant process comprises a soaking step and a controlled cooling step, and specific coal free index swell. It is the Examiner's position that the inclusion of a soaking step and controlled cooling step would be obvious in view of Koppelman. Koppelman teaches a soaking and a control cooling steps after a carbonizing step for treating coal, note the bridging paragraph of columns 6 and 7. It would be obvious to one of ordinary skill in the art to add the soaking and control cooling steps of the secondary reference to the

process of the primary reference as the cooling step because the use of two or more conventional steps to achieve the same cooling steps render the instant claims obvious.

Claims 11-15 are rejected under 35 U.S.C. 103(a) as being unpatentable over Harnett 3,309,437 in view of Koppelman 4,127,391 combined with Madley et al (Madley) GB 1,489,690 and Kirk-Othmer as applied to claims 1-5 above, and further in view of Kuroda JP-0,811,287,619A.

Harnett teaches a porous based product having comprehensive strength typically in excess of 5,000 psi (note page 4, lines 1-9) when heated to 950^{0}C and an apparent density of 0.93 g/cc (note Table 1 for examples 4 and 5) and further graphitizing (note columns 5, lines 20-44). Patentee's apparent density of between about 0.1 and about 0.8 g/cm^3 reads on Applicants' apparent density of 0.93 g/cc. Patentee also teaches that formed bodies are used for insulating blocks for furnaces and reactors, filters, etc. (Note column 3, lines 12-22) and that the core products are formed inside containers made of graphite, stainless steel or cardboard (note column 2, lines 4-11).

The instant claims of Applicants require the core to be laminated sheet product wherein Harnett with the secondary reference teachings is silent to the said laminated products being sheet products. It is the examiner's position that it would be obvious to the artisan in the art to use a core between laminate sheets in view of JP '876.

The JP '876 reference teach laminated sheets comprising a core of charcoal powder (graphitized coal product) and activated carbon powder (carbonized and coal product) note the English abstract and Figures 1-3. It would be obvious to the artisan in the art to use the laminated sheet with a core of the JP '876 patent as the laminated

sheet with the core of Harnett with the combined teachings of the secondary references. The cores and sheets of JP '876 are of the same nature as the core and container of Harnett to be used for the same intended purposes as laminated products for walls, etc.

Applicant's arguments with respect to claims 1-15 have been considered but are moot in view of the new ground(s) of rejection.

The prior art cited but not applied further teach coal and coal base products of the same nature as claimed by applicants.

Any inquiry concerning this communication or earlier communications from the examiner should be directed to Margaret B. Medley whose telephone number is 703-308-2518. The examiner can normally be reached on Monday-Friday from 7:30 am to 6:30pm.

If attempts to reach the examiner by telephone are unsuccessful, the examiner's supervisor, Vasu Jagannathan can be reached on 703-306-2777. The fax phone numbers for the organization where this application or proceeding is assigned are 703-872-9310 for regular communications and 703-872-9311 for After Final communications.

Any inquiry of a general nature or relating to the status of this application or proceeding should be directed to the receptionist whose telephone number is 703-308-0661.

Examiner Medley/mn
July 25, 2002

Margaret B. Medley
MARGARET MEDLEY
PRIMARY EXAMINER